

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-12 and 27 are now pending in this application. Claims 13-26 were previously canceled. Claim 1 is herein amended. Support for this amendment is found at least in the specification at page 25, lines 1 and 2, and in figs. 3-5. No new matter is added.

In the outstanding Office Action, claims 1-7 and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Montgomery, U.S. Patent No. 6,280,595. Claims 1, 2, 4-7, and 12 were rejected under 35 U.S.C. § 102(b) as anticipated by Ackley, U.S. Patent No. 6,225,059. Claims 1-12 and 27 were rejected under 35 U.S.C. § 103(a) as obvious over Montgomery, in view of Segev, U.S. Patent No. 5,843,650. Claims 1-12 and 27 were rejected under 35 U.S.C. § 103(a) as obvious over Ackley in view of Segev.

Claim 1, from which claims 2-12 and 27 depend, is herein amended, obviating the instant rejections. As amended, claim is directed to a device comprising a support comprising a surface. The surface has an attachment zone that is capable of being functionalized with a probe, which can be bound to a target so as to attach it. The device also has a working electrode, with a counterelectrode for the working electrode. The working electrode and counterelectrode are placed on the support in the vicinity of the attachment zone. The working electrode borders or surrounds the attachment zone. The device has an empty space separating the attachment zone and the working electrode. The device also has a means for applying a given electric current or a given potential to the working electrode so as to cause a local variation in pH in the region of the attachment zone when the attachment zone and the electrodes are immersed in an aqueous solution. All of the remaining claims depend from claim 1 and include all of the claim 1 limitations.

Anticipation requires the disclosure in a single prior art reference of each element in the claim arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2D 1452, 221 USPQ 481, 485 (Fed. Cir. 1984). Neither Montgomery nor Ackley disclose a the claimed device in which the attachment zone and the working electrode are distinct zones, separated by an empty space, located on the on the support.

Montgomery does not teach a device in which the attachment zone and the working electrode are distinct zones, separated by an empty space. In the Montgomery device, the attachment zone is the working electrode. There is no empty space between the attachment zone and the working electrode. The working electrode/attachment zone in Montgomery is covered by a membrane containing reactive moieties.¹ Once the method of Montgomery has been implemented, the molecules attached to said reactive moieties are present at the surface of the working electrode.² Indeed, the Office agrees that this space is not empty, noting that Montgomery discloses an “attachment zone (one or more molecules bearing at least a protected chemical functional group) that is not in direct contact with the electrodes which include a working electrode.”³ The space between the attachment zone and the electrode, comprising “one or more molecules bearing at least one protected chemical functional group”⁴ is clearly not empty. Accordingly, Montgomery cannot anticipate amended claim 1, or the claims depending therefrom. Applicants respectfully request withdrawal of the instant rejections.

Likewise, Ackley does not teach a device in which the attachment zone and the working electrode are distinct zones, separated by an empty space. As noted by the Office, Ackley teaches an embodiment “wherein individual electrodes 12 are covered by a

¹ Montgomery, col. 27, lines 27-28; col. 33, lines 19-25; col. 36, lines 37-41.

² *Id.* at col. 28, lines 24-28; col. 34, lines 38-43; col. 37, lines 51-56.

³ April 15, 2009 Office Action, at p. 2.

⁴ April 15, 2009 Office Action, at p. 2, citing Montgomery, col. 12, lines 1-5.

permeation layer 14, above which are provided attachment regions 16.”⁵ With the permeation layer filling the “space” between the attachment zone and the electrode between, the space is not empty. Accordingly, Ackley cannot anticipate amended claim 1, or the claims depending therefrom. Applicants respectfully request withdrawal of the instant rejections.

Claims 1-12 and 27 were rejected under 35 U.S.C. § 103(a) as obvious over Montgomery, in view of Segev, U.S. Patent No. 5,843,650. Claims 1-12 and 27 were rejected under 35 U.S.C. § 103(a) as obvious over Ackley in view of Segev. As noted, neither Montgomery nor Ackley teach a device having an empty space separating the working electrode and the attachment zone. Segev does not remedy this deficiency, as it merely teaches a method and kit for amplifying and detecting single or double-stranded target nucleic acid molecules or a minute sequence alteration in a test sample. Segev does not teach anything regarding a device in which the working electrode borders or surrounds the attachment zone and in which the working electrode and the attachment zone are separated by an empty space. One skilled in the art could not combine the recited references to reach the claimed invention.

Moreover, one skilled in the art would not be motivated to modify the devices of Montgomery or Ackley to reach the claimed invention. Without the molecules attached to said reactive moieties being present at the surface of the working electrode/attachment zone, the Montgomery device cannot function as intended. Likewise, the absence of a permeation layer between the electrodes and the attachment zones in the Ackley device will result in the inappropriate functioning of that device. Because modifying the prior art invention to make the space separating the working electrode and attachment zone empty will render the prior art inventions unsatisfactory for their intended purpose, then there can be no suggestion or

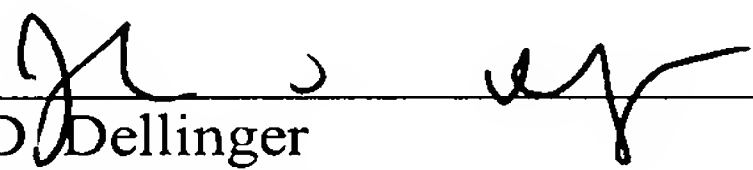
⁵ April 15, 2009 Office Action, at p. 4, citing Ackley, figs. 1A and 1B, col. 12, lines 40-41, 51-53.

motivation to make such modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). According, Applicants respectfully request withdrawal of the rejections of claim 1 and its dependent claims as obvious over Montgomery, in view of Segev, and over Ackley in view of Segev.

In light of the above discussion, the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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